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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/941,732	08/30/2001	Kentaro Hara	056203-0105	6485
22428	7590	12/02/2005	EXAMINER	
FOLEY AND LARDNER LLP SUITE 500 3000 K STREET NW WASHINGTON, DC 20007			GENACK, MATTHEW W	
			ART UNIT	PAPER NUMBER
			2645	

DATE MAILED: 12/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/941,732	Applicant(s) HARA, KENTARO	
	Examiner Matthew W. Genack	Art Unit 2645	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 November 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 6-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 6-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>21 October 2005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1 and 3 are rejected under 35 U.S.C. 102(e) as being anticipated by Trompower, U.S. Patent No. 6,006,096.

Trompower discloses a network cellular communication system wherein a mobile terminal communicates with a plurality of base stations, each base station with one or more omni-directional and/or directional antennas, said base stations connected to a host computer via a backbone, and wherein said base stations change the power level of signals transmitted to said mobile terminal in order to determine the location of said mobile terminal (Abstract, Column 2 Line 66 to Column 3 Line 14, Column 10 Lines 29-40, Figs. 1-4). Specifically, the base stations sweep 360 degrees (either mechanically or electrically with beam forming methods) to determine a cell that the mobile terminal is in, and reduce the transmission powers and receiver sensitivities in order to reduce the sizes of their respective coverage areas until the mobile terminal's location is determined to the best possible accuracy (Column 9 Line 43 to Column 10 Line 28, Fig. 2).

Art Unit: 2645

The mobile terminal indicates that it has received signals from respective antennae of the various base stations by transmitting signals back to them, thereby providing Boolean reception data to the host computer for use in its determination of the mobile terminal's location (Figs. 8-10).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Trompower in view of Bachhuber *et. al.*, U.S. Patent No. 6,087,987.

Regarding Claim 2, Trompower does not expressly disclose the determination of the position of the mobile terminal by said mobile terminal.

Bachhuber *et. al.* discloses a radio system that allows the electronic key for a motor vehicle to be located (Abstract, Column 1 Line 66 to Column 2 Line 2). The electronic key is portable (Column 4 Lines 6-15, Figs. 1-2). The motor vehicle contains a set of transmitter/receivers that are coupled to a controller and that are stationary with respect to said motor vehicle and that engage in wireless communication with the electronic key (Column 3 Line 61 to Column 4 Line 1, Column 4 Lines 21- 24, Fig. 1). The motor vehicle contains four antennae, coupled to respective transmitter/receivers, located in corners (Column 3 Lines 56-57, Column 6 Lines 20-23, Fig. 3). The transmitter/receivers transmit search

Art Unit: 2645

signals that are received by the electronic key, and that causes said electronic key to transmit an identification signal back to the transmitter/receiver (Column 4 Lines 46-59); additionally, the electronic key can measure the received power levels of signals (such as search signals) sent from the transmitter/receivers and convert these measurements into location information (Column 5 Lines 15-20), and transmit this information back to the transmitter/receivers and thereby the controller (Column 5 Lines 31-34).

At the time that the invention was made, it would have been obvious to one of ordinary skill in the art to modify the invention of Trompower by providing the means for the determination of the position of the mobile terminal by said mobile terminal.

One of ordinary skill in the art would have been motivated to make this modification so that the user of the mobile terminal can also make use of his location information.

Regarding Claim 6, Trompower does not expressly disclose the determination of the position of the mobile terminal as viewed in a direction in which paired antennae are arrayed.

Bachhuber *et. al.* discloses that the antennas have predetermined directional characteristics that are used by the controller in the computation of the location of the electronic key relative to these antennas (and thus, relative to the baseline vectors determined by the positions of the antennae pairs) (Column 6 Lines 13-18).

Art Unit: 2645

At the time that the invention was made, it would have been obvious to one of ordinary skill in the art to modify the invention of Trompower by providing the means for the determination of the position of the mobile terminal as viewed in a direction in which paired antennae are arrayed.

One of ordinary skill in the art would have been motivated to make this modification so as to increase the sensitivity of the power measurements (Bachhuber *et. al.* Column 6 Lines 13-17).

5. Claims 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Trompower in view of Bachhuber *et. al.*, further in view of Memmola, U.S. Patent No. 4,733,215.

Regarding Claim 7, Trompower does not expressly disclose the placement of the stationary antennae inside motor vehicles.

Bachhuber *et. al.* discloses that the stationary device is located inside of a motor vehicle (Column 3 Line 61 to Column 4 Line 1, Column 4 Lines 21- 24, Fig. 1).

At the time that the invention was made, it would have been obvious to one of ordinary skill in the art to modify the invention of Trompower by creating a wireless keyless motor vehicle entry system that is analogous to the system of the invention of Trompower.

One of ordinary skill in the art would have been motivated to make this modification because the problem of determining the position of a motor vehicle user with a wireless keyless entry device relative to his motor vehicle is well known in the art, and a wireless system that leads to improved position

Art Unit: 2645

determination of a mobile device may be naturally applied to solving said problem.

Bachhuber *et. al.* does not expressly disclose the determination that the electronic key is inside or outside of the motor vehicle.

Memmola discloses an antitheft protection device that uses wireless technology that includes a portable transmitter (Abstract, Column 1. Line 49 to Column 2 Line 2, Column 4 Lines 42-55, Fig. 1). It can be determined if an individual is inside of a motor vehicle (Column 9 Lines 22-30).

At the time that the invention was made, it would have been obvious to one of ordinary skill in the art to modify the invention of Trompower as modified by Bachhuber *et. al.* by providing means for the determination that the electronic key is inside or outside of the motor vehicle (and correspondingly, if the user in possession of said electronic key is inside or outside of said motor vehicle).

One of ordinary skill in the art would have been motivated to make this modification because the Boolean variable, whether one is inside or outside of a motor vehicle, has much relevance to the states that certain motor vehicle systems, such as locking mechanisms and the engine ignition, should be in.

Regarding Claim 8, Bachhuber *et. al.* discloses that the electronic key transmits an encoded signal that contains user-specific information (Column 4 Lines 25-28), and that the motor vehicle's engine control system is enabled if the user is positively identified Column (4 Lines 28-34).

Regarding Claim 9, Bachhuber *et. al.* teaches that the lock/unlock state of the doors of a keyless entry motor vehicle may be controlled by a portable wireless device (Column 1 Lines 32-63).

6. Claims 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Trompower in view of Bachhuber *et. al.*, further in view of Memmola, further in view of Röhl, U.S. Patent No. 6,211,776.

Neither Trompower, nor Bachhuber *et. al.*, nor Memmola expressly discloses the practice of reducing transmission power of the stationary vehicle-mounted device or the electronic key for the purpose of reducing the communication range.

Röhl discloses a method by which an interrogation signal, transmitted from a motor vehicle antenna to a portable transponder, is reduced in power until said portable transponder just barely receives said interrogation signal (Abstract, Column 1 Lines 51-58).

At the time that the invention was made, it would have been obvious to one of ordinary skill in the art to modify the invention of Trompower as modified by Bachhuber *et. al.* as modified by Memmola by adding the practice in which the transmission power of the stationary device or electronic key is reduced so as to reduce communication range, including ranges restricted to the vehicle if the context is appropriate.

One of ordinary skill in the art would have been motivated to make this modification because it would make the theft of sensitive data, such as unlocking and ignition codes, much more difficult (*i.e.*, a potential thief with receiving

Art Unit: 2645

equipment would have to be so close to the motor vehicle that said potential thief would risk being seen by the user).

Response to Arguments

7. Applicant's arguments with respect to amended Claims 1-3 have been considered but are moot in view of the new grounds of rejection of said Claims.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew W. Genack whose telephone number is 571-272-7541. The examiner can normally be reached on FLEX.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Fan Tsang can be reached on 571-272-7547. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Art Unit: 2645

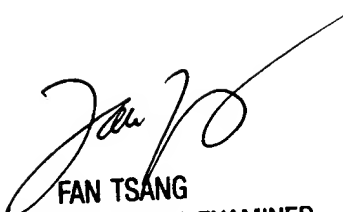
Matthew Genack

Examiner

Art Unit 2645

Matthew Genack

28 November 2005


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